<u>**Amendments to the Claims:**</u>

This listing of claims will replace all prior versions, and listings, of claims in the application.

<u>**Listing of Claims:**</u>

1. (Original) A method for controlling access to resources shared among a plurality of logical processors, comprising:

obtaining exclusive access for a first logical processor to a resource descriptor describing a usage allocation of said shared resources;

querying said resource descriptor to determine whether resources needed by said first logical processor are available;

if resources needed by said first logical processor are available, updating said resource descriptor to reserve said resources for exclusive use by said first logical processor; and

releasing said exclusive access for said first logical processor to said resource descriptor.

2. (Original) The method of claim 1, further comprising:

if said resources needed by said first logical processor are not available, releasing said exclusive access for said first logical processor to said resource descriptor.

3. (Original) The method of claim 1, further comprising, after the releasing, accessing a shared resource by said first logical processor.

4. (Original) The method of claim 1, further comprising:

after exclusive access for said first logical processor to said resource descriptor is released, obtaining exclusive access for a second logical processor to said resource descriptor;

querying said resource descriptor to determine whether resources needed by said second logical processor are available;

if resources needed by said second logical processor are available, updating said resource descriptor to reserve said resources for the exclusive use of said second logical processor; and

releasing said exclusive access for said second logical processor to said resource descriptor.

5. (Original) The method of claim 4 further comprising:

if said resources needed by said second logical processor are not available, releasing said exclusive access for said second logical processor to said resource descriptor.

6. (Original) In a device comprising a plurality of logical processors and a plurality of resources shared by said logical processors, a method for controlling access by said logical processors to said resources comprising:

writing to a semaphore register to reserve exclusive access by a first logical processor to a resource descriptor register;

writing to said resource descriptor register to reserve at least a first resource of said plurality of shared resources for exclusive use by said first logical processor; and

writing to said semaphore register to release said exclusive access by said first logical processor.

7. (Original) The method of claim 6 further comprising:

writing to said semaphore register to reserve exclusive access by a second logical processor to said resource descriptor register;

writing to said resource descriptor register to reserve at least a second resource of said plurality of shared resources for exclusive use by said second logical processor; and

writing to said semaphore register to release said exclusive access by said second logical processor.

8. (Original) The method of claim 6, wherein said resource descriptor register comprises at least one logical processor identifier associated with one of said first and second logical processors.

9. (Original) The method of claim 8, wherein said resource descriptor register further comprises a status identifier associated with said logical processor identifier.

10. (Currently amended) A device comprising:

    a plurality of logical processors;

    a plurality of resources shared by said plurality of logical processors;

    a resource descriptor to identify a status of said shared resources; and

    a semaphore to ~~control access by~~ <u>reserve exclusive access for one of</u> said plurality of logical processors to said resource descriptor.

11. (Original) The device of claim 10, further comprising program code executable by said plurality of logical processors to control access to said shared resources;

    wherein said program code includes instructions for:

        causing a first logical processor to update said semaphore to reserve exclusive access to said resource descriptor;

        causing said first logical processor to update said resource descriptor to reserve exclusive use of at least a first resource of said shared resources; and

        subsequently causing said first logical processor to update said semaphore to release said exclusive access.

12. (Original) The device of claim 11, said program code further comprising instructions for:

        causing a second logical processor to update said semaphore to reserve exclusive access to said resource descriptor;

causing said second logical processor to update said resource descriptor to reserve exclusive use of at least a second resource of said shared resources; and

subsequently causing said second logical processor to update said semaphore to release said exclusive access;

wherein after reserving exclusive use of said first and second resources, respectively, said first and second logical processors concurrently use said first and second resources, respectively.

13. (Original) A computer-usable medium tangibly embodying logical processor-executable instructions for controlling access to shared resources in a device comprising a plurality of logical processors, a first logical processor requiring at least a first resource of said shared resources, and a second logical processor requiring at least a second resource of said shared resources, said instructions when executed causing said first logical processor to implement a process comprising:

setting a lock bit in a semaphore register to reserve exclusive access to a resource descriptor register;

generating a first bitmap identifying said first required resource;

applying said first bitmap to said resource descriptor register to reserve said first required resource;

re-setting said semaphore lock bit to release said exclusive access; and

using said first resource.

14. (Original) The computer-usable medium of claim 13, said instructions when executed further causing said second logical processor to implement a process comprising:

when said first logical processor has re-set said semaphore lock bit, setting said semaphore lock bit;

generating a second bitmap identifying said second required resource;

applying said second bitmap into said resource descriptor register to reserve said second required resource;

re-setting said semaphore lock bit to release said exclusive access; and

using said second resource;

wherein said first and second logical processors use said first and second

resources in parallel.

15. (Original) The computer-usable medium of claim 13, wherein said setting a lock bit comprises supplying an identifier of said first logical processor for writing into said semaphore register.

16. (Currently amended) In a device comprising:

a plurality of logical processors and a plurality of resources shared by said logical processors;

a resource descriptor that controls to control access to said resources;

a semaphore register that controls access to reserve exclusive access for one of said plurality of logical processors to said resource descriptor; and

semaphore access control hardware that controls to control access to said semaphore register;

a method comprising;

causing a first logical processor to execute software to supply an identifier of said first logical processor to said semaphore access control hardware; and

writing said identifier to said semaphore register to reserve exclusive access to said resource descriptor for said first logical processor.

17. (Original) The method of claim 16, further comprising:

detecting that said first logical processor has failed;

causing a second logical processor to execute software to supply an identifier of said first logical processor to said semaphore access control hardware; and

writing said identifier to said semaphore register to release exclusive access to said resource descriptor for said first logical processor.